

Receipt 1001/013 (n)

13 PAGES

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Helmut DAUDEL, Helmut FINGER, Peter FLEDERSBACHER, Hans-Josef HEMER, Ralf KOCH, Stephan SCHENKEL and Siegfried SUMSER

Appln. No.: 10/524,882

Filed: February 16, 2005

FOr: EXHAUST GAS TURBOCHARGER FOR AN INTERNAL COMBUSTION ENGINE

Attorney Docket No.: DKT02033

Customer No.: 000053831

REQUEST FOR CORRECTED OFFICIAL FILING RECEIPT

Mail Stop:

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

ATTN: OFFICE OF INITIAL PATENT EXAMINATION'S FILING RECEIPT CORRECTIONS

Sir:

Applicants request a correction of the Updated Official Filing Receipt for the above-identified application as follows:

1. Total Claims - Seven (7) claims, - Official Filing Receipt lists only six (6) total claims.

A copy of the Official Filing Receipt with the changes noted thereon is provided herewith, along with a copy of the Preliminary Amendment filed on February 16, 2005.

U.S. Application No. 10/524,882 REQUEST FOR CORRECTED FILING RECEIPT

Attorney Docket No.: 3953.218

The error was caused by the U.S.P.T.O.; therefore no fee is required.

Respectfully submitted,

Stephan A. Penderf Registration No. 32,665

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Date: September 22, 2005

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that the foregoing REQUEST FOR CORRECTED FILING RECEIPT for U.S. Application No. 10/524,882 filed February 16, 2005, is being facsimile transmitted to the Patent and Trademark Office, facsimile number (703) 746-9195 on this 22nd day of September, 2005.

Stephan A. Pendorf

Name of Person Signing Certification

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Date

AUTHORIZATION TO CHARGE

The Commissioner is hereby authorized to charge any additional fees which may be required at any time during the prosecution of this application without specific authorization, or credit any overpayment, to Deposit Account No \(\)\(\)\(16-0877\).

ephan A. Pendorf

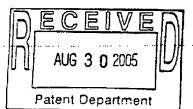
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Page 1 of 3 TRB

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Addres: COMMISSIONER FOR PATENTS P.O. Box 1470 Alaxadna, Virgina 22313-1450

APPL NO. | FILING OR 371 | ART UNIT | FIL FEE REC'D | ATTY.DOCKET NO | DRAWINGS | TOT CLMS | IND CLMS | 10/524,882 | 02/16/2005 | 3747 | 900 | DKT02033 | 2 | 6 | 1 |

BorgWarner Inc Patent Adminstrator 3850 Hamlin Road Aubum Hills, MI 48326-2872



CONFIRMATION NO. 5879
FILING RECEIPT

Date Mailed: 08/19/2005

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Helmut Daudel, Schomdorf, GERMANY; Helmut Finger, Leinfelden-Echterdingen, GERMANY; Peter Fledersbacher, Stuttgart, GERMANY; Hans-Josef Hemer, Worms, GERMANY; Ralf Koch, Russingen, GERMANY; Stephan Schenkel, Stuttgart, GERMANY; Siegfried Sumser, Stuttgart, GERMANY;

Power of Attorney:

Stephen Pendorf-32665

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/EP03/08868 08/09/2003

Foreign Applications

GERMANY 102 37 413.9 08/16/2002

Projected Publication Date: 11/24/2005

Non-Publication Request: No

Early Publication Request: No

Page 2 of 3

Title

Exhaust gas turbocharger for an internal combustion engine

Preliminary Class

123

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process simplifies the filing of patent applications on the same invention in member countries, but does not result in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filling foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Helmut DAUDEL, Helmut FINGER, Peter FLEDERSBACHER, Hans-Josef HEMER, Ralf KOCH, Stephan SCHENKEL and Siegfried SUMSER

Appln. No.: New .

Filed: February 16, 2005

For: EXHAUST GAS TURBOCHARGER FOR AN INTERNAL COMBUSTION ENGINE

Attorney Docket No.: DKT02033

PRELIMINARY AMENDMENT

Attn: Mail Stop PCT Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Prior to examination of the above-identified application, please amend the application as follows:

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of claims, which begins on page 4 of this paper.

Remarks/Arguments begin on page 7 of this paper.

09/22/2005 13:51 FAX 図007/013

U.S. Application No.: NEW

PRELIMINARY AMENDMENT Attorney Docket: DKT02033

IN THE SPECIFICATION:

Please add the following paragraph after the title:

Cross Reference To Related Application

[0001] This application is a national stage of PCT/EP2003/008868 filed August 9, 2003 and based upon DE 102 37 413.9 filed August 16, 2002 under the International Convention.

Please replace paragraph [0002] with the following amended paragraph:

[0002] The invention concerns an exhaust gas turbocharger for an internal combustion engine according to the precharacterizing portion of Claim 1.

Please cancel paragraph [00010]:

[00010] This problem is inventively solved by the characteristics of Claim 1.

Please replace paragraph [00011] with the following amended paragraph:

[00011] According to the design of the new exhaust gas turbocharger, it is provided that the position of the flow ring in the housing of the turbocharger is variably adjustable. According to the state of the art this flow ring is always provided as a component fixed with the turbocharger housing, in contrast to which in accordance with new Claim 1 the flow ring

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U.S. Application No.: NEW PRELIMINARY AMENDMENT

Attorney Docket: DKT02033

is moveable. By making the flow ring moveable, the possibility is created to reduce or even completely eliminate the gap dimension which is inherently required in construction to provide freedom of movement to the parts, or is created by wear or thermal expansion or by other causes. Leakages or flow-by at end surface of the adjustable guide vanes can substantially or completely excluded, and a desired pressure relationship can be adjusted within the turbine, which imparts a desired gas flow to the turbine wheel. In order to be able to adjust the radial guide vanes, a minimal gap at the axial end surface of the radial guide vanes is necessary; for adjusting the radial guide vanes the adjustable flow ring can be axially displaced in a position further distant from the radial ring of guide vanes. Subsequently, for closing of air gaps, the flow ring is advanced until contact with the end surface of the radial guide vanes or, as the case may be, another component of the radial guide grid or to a spacer provided for this purpose.

U.S. Application No.: NEW PRELIMINARY AMENDMENT

Attorney Docket: DKT02033

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Original Claims 1 - 10 (cancelled)

PCT Substitute Claims 1 - 7 (cancelled)

11. (new) An exhaust gas turbocharger for an internal combustion engine, with a turbine adapted for receiving the engine exhaust gas flow, and with a turbine driven compressor for providing intake flow to the internal combustion engine,

wherein the turbine (1) has a flow channel (3) with a radial flow entry section (3a) and a further flow entry section,

wherein a flow ring (7) separates the flow entry cross-section (3a) and the further flow entry section and borders the flow entry cross-section (3a),

wherein an adjustable ring of guide vanes (5) is provided in the radial flow entry cross-section (3a) for variably adjusting the flow entry cross-section (3a),

wherein the flow ring (7) is axially displaceable in the housing of the exhaust gas turbine (1) between a position contacting the ring of guide vanes (5) and a position exposing a gap between the flow ring (7) and the ring of guide vanes (5), and

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Attorney Docket: DKT02033

wherein axial relief boreholes are provided in the flow ring (7) extending between the axial faces of the flow ring for trimming of forces acting on the flow ring (7) when lying against the radial ring of guide vanes (5) in such a manner, that as a result of the reduction in static pressure in the ring of guide vanes (5) the flow ring (7) experiences a resulting pressure in the direction of the radial ring of guide vanes (5).

- 12. (new) The exhaust gas turbocharger according to Claim 11, wherein abutments or end stops (18, 19) are provided fixed relative to the housing for limiting the axial displaceability of the flow ring (7).
- 13. (new) The exhaust gas turbocharger according to Claim 11, wherein spacer sleeves (14) are provided in the radial flow cross-section (3a), which determine the minimum axial breadth of the radial flow entry cross-section (3a).
- 14. (new) The exhaust gas turbocharger according to Claim 11, wherein a seal ring (11) is provided on the radial innerlying side of the flow ring (7) for sealing against a housing fixed component (13).
- 15. (new) The exhaust gas turbocharger according to Claim 11, wherein the radial ring of guide vanes (5) includes

U.S. Application No.: NEW PRELIMINARY AMENDMENT

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adjustable guide vanes (6), which include cover discs (16, 17) on at least one axial end face.

- 16. (new) The exhaust gas turbocharger according to Claim 11, wherein adjustable guide vanes (6) of the radial ring of guide vanes (5) are mounted in the turbocharger housing via an axial shaft (15a).
- 17. (new) The exhaust gas turbocharger according to Claim 11, wherein adjustable guide vanes (6) of the radial ring of guide vanes (5) are mounted in the flow ring (7) via an axial shaft (15b).

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PRELIMINARY AMENDMENT

Attorney Docket: DKT02033

REMARKS

The claims have been amended in order to eliminate multiple dependent claims and claims improperly depending from multiple dependent claims, and to otherwise conform the claims to U.S. practice. Care has been taken to ensure that no new matter is added to the text.

Paragraphs [0002], [00010] and [00011] have been amended, respectively, to remove references to Claim 1 in the specification. Care has been taken to ensure that no new matter has been added.

Entry and favorable consideration prior to consideration are respectfully requested.

Respectfully submitted,

Registration No. 32,665

PENDORF & CUTLIFF 5111 Memorial Highway Tampa, Florida 33634-7356 (813) 886-6085

Date: February 16, 2005

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U.S. Application No.: NEW

PRELIMINARY AMENDMENT Attorney Docket: DKT02033

EXPRESS MAIL CERTIFICATE

"EXPRESS MAIL" MAILING LABEL NUMBER: EV550579705US

DATE OF DEPOSIT: February 16, 2005

I HEREBY CERTIFY that the foregoing Preliminary Amendment and a stamped receipt post card are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §1.10 on the date indicated with sufficient postage and is addressed: ATTN: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

The Commissioner is hereby authorized to charge any additional fees which may be required at any time during the prosecution of this application without specific authorization, or credit any overpayment, to Deposit Account Number 16-0877.

Bonnie L. Horst